

Malaria incidence: confirmed cases

The ideal approach to managing malaria and to reporting epidemiological data is to undertake laboratory confirmation in every case. Some administrative bodies insist that this is the only data worth recording. Where funding, transport, communications, human resources, medical facilities are in abundance a strong argument can be made along those lines. But where communities or nations are poor and facilities, transport, communications, human resources are in short supply it is unrealistic to limit reporting to confirmed cases only at this time, although certainly it is a goal worth working towards.

Laboratory confirmation traditionally is done by microscopy, a good technology but one that requires high operator skills and training. More recently a variety of rapid immuno-diagnostic test systems (dipstick) have been developed, trialed in the region and are currently in restricted use in some countries. Both methods are useful, both have some limitations. It is not intended to enter into technical debate here but rather to present regional data on the incidence of confirmed malaria cases, regardless of the laboratory diagnostic technology employed.

Given that some countries in the region attempt to report only confirmed cases while others confirm only a proportion of total cases, the overall database will not be uniformly complete. Indeed, 'there have been changes in activity in this context within the 3-year period 1996-98 and only for the year 1998 is there a relatively complete record available of those cases that' were confirmed in the laboratory. Hence the single year's data are given in this instance (Figure 16).

This single, combined data set is quite informative. When compared with the map of total case incidence for 1998 (Figure 15) the incidence of confirmed cases is much lower and is especially lower in certain unit areas, reflecting the proportion of cases for which confirmation was obtained. In many instances the rate of confirmation is very low because of the remoteness of villages and the absence of testing facilities and/or personnel. It is also noticeable that the incidence profiles of China and Thailand, as expected, do not change between these two Figures, because only confirmed cases are reported, even from remote sites.

It must be noted, however, that additional information is required to evaluate fully the confirmation process: the time lag between blood smear taking and institution of specific therapy based on the blood smear diagnosis is an important consideration. This can vary from minutes to days or even weeks, depending on whether microscopy is available or not at the site of blood collection. If blood smears have to be transported long distances for microscopy then the ensuing definitive diagnosis may be of little or no benefit to the management of the patient's illness. Essentially the effective diagnosis is clinical in this situation: confirmation is recorded yet the value thereof is in epidemiological records only.

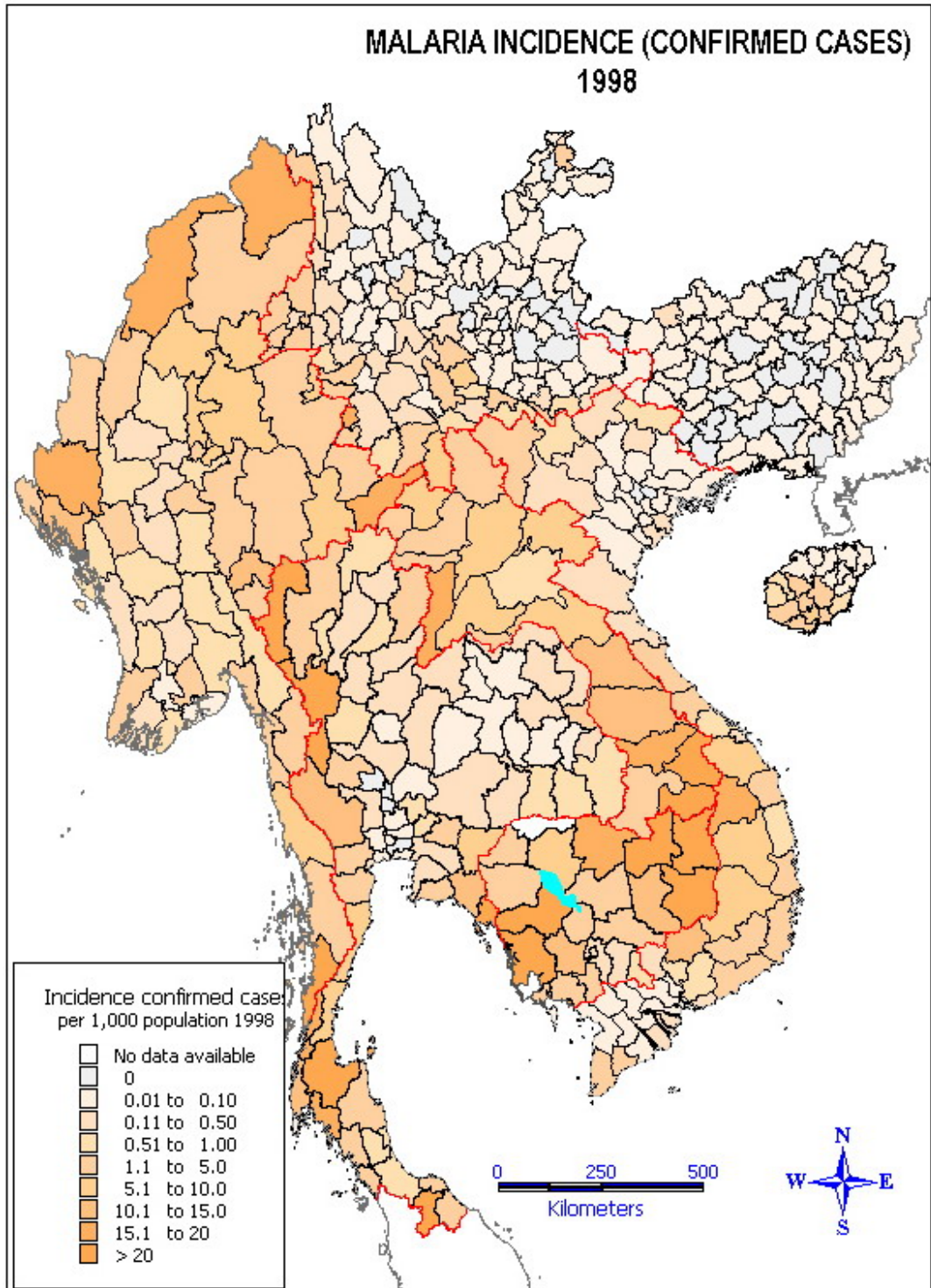


Figure 16.

Clearly, if and when rapid dipstick diagnosis is available in remote areas, the situation could potentially change dramatically since this method can be administered by less skilled personnel and gives on the spot answers. This could also change the accuracy of drug treatment and hence affect implementation of drug policy. There is however the matter of capital cost to the provider even though the cost to the consumer may be less (Kaewsonthi *et al*, 1996) and of logistics in remote sites. Nevertheless rapid diagnostic technology may be the only way of approaching the desirable goal of accurate case definition and more accurate definitive treatment in a time frame that will obviate much severe malaria and lead to lowering of the spread of drug resistance

Certainly the ideal goal for the region as a whole should be to confirm the diagnosis of all malaria cases and to do so in a short time frame for the above reasons. Reporting of confirmed cases should also be rapid in order to capitalize on the epidemiological advantage of definitive diagnosis. Of course this ideal is constrained by economic realities. Further, this goal should be extended to the private health sector which at present is largely left out of these considerations: since it appears that most patients in the private sector are treated without diagnostic confirmation the true picture will be less than satisfactory.